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1. (Amended) A computerized method for use in simulating an operation of an electronic system, said method being carried out using a computer system, said method comprising the steps of:

generating a physically-accurate description of a first portion of said system, said physically-accurate description comprising actual physical characteristics of said first portion;

generating an approximate mathematical model of a remaining portion of said system, said model being based upon hierarchical analysis of said remaining portion; and

using both said physically-accurate description and said approximate model to simulate the operation of said system.

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5. (Amended) A computerized system for use in simulating an operation of an electronic system, comprising the steps of:

a modeling engine that modifies a first model of said electronic system, said first model including only hierarchical analysis mathematical functions estimating operation of said electronic system, said modeling engine modifying said first model to include both at least one hierarchical analysis mathematical function estimating operation of a portion of said electronic system and a physically-accurate description of another portion of said electronic system; and

a simulation engine that simulates the operation of said electronic system based upon both said at least one function and said physically-accurate description.